



Building a Leading ENT / Allergy Specialty Company

Commercial Launch Call
April 25, 2024



Forward-Looking Statements

This presentation and our accompanying remarks contain “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. All statements that are not historical facts are hereby identified as forward-looking statements for this purpose and include, among others, statements relating to: the potential benefits of the recent FDA approval of XHANCE for the treatment of chronic rhinosinusitis without nasal polyps (also called chronic sinusitis); the benefits of XHANCE for the treatment of chronic sinusitis; the benefits of the Exhalation Delivery System; our commercial plans and expectations for XHANCE; expected benefits of the recently implemented HUB pharmacy; preliminary XHANCE net revenue for the three months ended March 31, 2024; our expectation that our base planned efforts focused on a specialty prescriber audience can grow XHANCE peak year net revenues to more than \$300 million; our expectation that we will produce positive income from operations (GAAP) in full year 2025; potential market expansion and growth opportunities; physician intent to prescribe XHANCE for chronic sinusitis; patent protection for XHANCE; potential for long revenue tail for XHANCE; and other statements regarding to our future operations, financial performance, prospects, intentions, strategies, objectives and other future events.

Forward-looking statements are based upon management’s current expectations and assumptions and are subject to a number of risks, uncertainties and other factors that could cause actual results and events to differ materially and adversely from those indicated by such forward-looking statements including, among others: physician and patient acceptance of XHANCE for its new indication; the ability to maintain adequate third party reimbursement for XHANCE (including its new indication); the potential for preliminary XHANCE net product revenue for the three months ended March 31, 2024 to change in connection with the finalization of our financial results for such period; the prevalence of chronic sinusitis and market opportunities for XHANCE may be smaller than expected; the ability to efficiently generate XHANCE prescriptions and net revenues; unexpected costs and expenses; the ability to cost-effectively activate XHANCE patients through direct-to-consumer promotion; potential for varying interpretation of clinical trial results and market research results; discrepancies between stated behavior and actual behavior in market research; our ability to comply with the covenants and other terms of the Amended and Restated Pharmakon Note Purchase Agreement; our ability to continue as a going concern; risks and uncertainties relating to intellectual property; and the risks, uncertainties and other factors discussed in the “Risk Factors” section and elsewhere in our most recent Form 10-K and Form 10-Q filings with the Securities and Exchange Commission (SEC) (including our Form 10-K to be filed with the SEC on March 7, 2024) – which are available at <http://www.sec.gov>. As a result, you are cautioned not to place undue reliance on any forward-looking statements. Any forward-looking statements made in this presentation speak only as of the date of this presentation, and we undertake no obligation to update such forward-looking statements, whether as a result of new information, future developments or otherwise.

Market, Industry and Other Data

This presentation and the accompanying remarks contains estimates, projections, market research and other information concerning markets for XHANCE and the size of those markets, the prevalence of certain medical conditions, XHANCE market access, and other physician, patient, payor and prescription data. Unless otherwise expressly stated, we obtain this information from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources, as well as from our own internal estimates and research

Agenda

Introduction and Corporate Updates	Ramy Mahmoud, MD, MPH
XHANCE Financial Outlook and Clinical Data in Chronic Sinusitis	Ramy Mahmoud, MD, MPH
XHANCE Market Opportunity and Updated Commercial Strategy	Paul Spence
Wrap Up	Ramy Mahmoud, MD, MPH

Optinose Overview:



Differentiated Product: XHANCE is the **First and Only** FDA-approved medicine for chronic sinusitis (also called chronic rhinosinusitis without nasal polyps)

- New market research highlights strong physician preference and intent to use



Significant Near-Term Growth Opportunity: XHANCE 2023 net revenue was \$71M. Recent label expansion provides up to 10x multiple on the TAM which was previously limited promotionally to ~1 million patients with nasal polyps, of which only 600-650k were diagnosed and treated per year

- Launching with current specialty sales force of 75 reps and phased modest incremental investment to expand reach
- Expecting **peak net revenue of \$300M+**
- Expecting **positive income from operations (GAAP) for full year 2025**



Longer-Term Growth Underappreciated: Totality of Addressable Market comprises 30 million patients, of whom 10 million are currently diagnosed and treated; another 20 million patients could be activated via Direct-to-Consumer promotion (DTC)

- Base forecast anticipates access primarily to ~3M currently treated patients in the specialty segment
- Beyond the base forecast: additional growth opportunities include promotional direct-selling partnership (eg, for primary care), digital/non-personal outreach into primary care or DTC segments, leveraging current commercial footprint for additional products, ex-U.S. licensing of rights to XHANCE



Cash flow durability: 13 Orange Book-listed patents (last to expire in 2036), and long revenue tail potential

- Locally acting topical drug supplied as a difficult-to-copy drug/device combination

Optinose – Financial Outlook for XHANCE in Chronic Sinusitis

We believe strong growth and profitability are possible in our current ENT and Allergy segment



Growth

With the new CS indication XHANCE has peak **net revenue potential of at least \$300M in specialty physician audience**



Efficiency

XHANCE launching into greatly expanded market with **existing 75 territory sales force and established insurance coverage**



Profitability

Increased revenue opportunity and sales efficiency support expectation of positive income from operations (GAAP) **for Full Year 2025**

Our Leadership team is focused on meeting or exceeding these objectives

XHANCE: Designed to be Meaningfully Different

13 Orange Book listed patents cover XHANCE (last to expire, 2036)



Patented sealing and stenting nosepiece

Specially shaped, it seals tightly in the nostril, stents the narrow nasal valve, especially the superior part, and shifts intranasal soft tissues

Patented translating mouthpiece

Enables proper fit and device orientation across a broad range of patient facial anatomy

Patented internal valve system

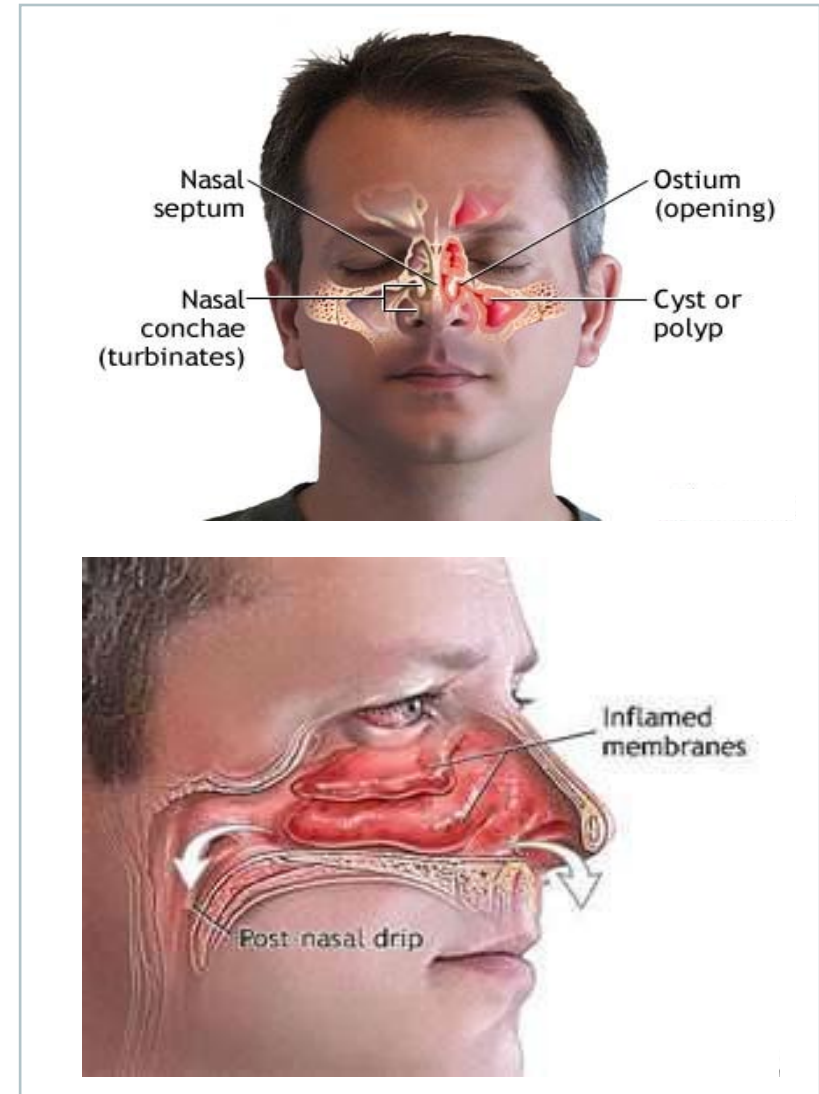
Aids unique deposition profile, ensures consistency of delivery, reduces patient coordination

Nonremovable, drug-filled vial

One month treatment (depending on dose)

Chronic Sinusitis is a common chronic inflammatory disease

- Chronic sinusitis (also called “chronic rhinosinusitis without polyps”) is frequently diagnosed and may or may not be accompanied by comorbid allergies
- Persistent inflammation causes pain, swelling, obstruction in deep nasal passages, sinus drainage tracts, the openings to the sinuses (ostia), and inside the sinuses
- Primary symptoms include congestion/obstruction, facial pain/pressure, rhinorrhea, and loss of smell/taste; sleep loss, persistent fatigue, and recurrent sinus infections are common
- Disease flares (acute exacerbations), often infections, are common, sometimes occurring multiple times per year. They drive many doctor visits and often lead to use of antibiotics and/or oral or systemic steroids



Chronic Sinusitis Is One of The Top 3 Adult Physician Visit Diagnoses¹

CS accounts for
≈10 million annual office visits,
of which

≈70% result in an antibiotic prescription¹

~45% of patients diagnosed with CS
underwent sinus surgery, at a mean duration of
4.7 months after initially meeting diagnostic
criteria for CS²

> **50%** of patients with chronic sinusitis
experience fatigue³

Up to **75%** of CS patients report poor sleep⁴

CS-related work productivity loss
\$20 Billion per year lost in productivity⁵

20+ days per year missed from work / school
(severe CRS with sinus surgery)⁵

1. Smith p1230/col2/para5 and 6, 2. Bhattacharyya 2011, 3. Orlandi RR, et al. *Int Forum Allergy Rhinol.* 2021;11(3):213-739, 4. Alt JA, et al. *Laryngoscope.* 2013;123(10):2364-2370. 5. Rudmik L. *Curr Allergy Asthma Rep.* 2017;17(4):20

XHANCE Significantly Improved Symptoms in Chronic Sinusitis: ReOpen2

Composite Symptom Score Encompassed:



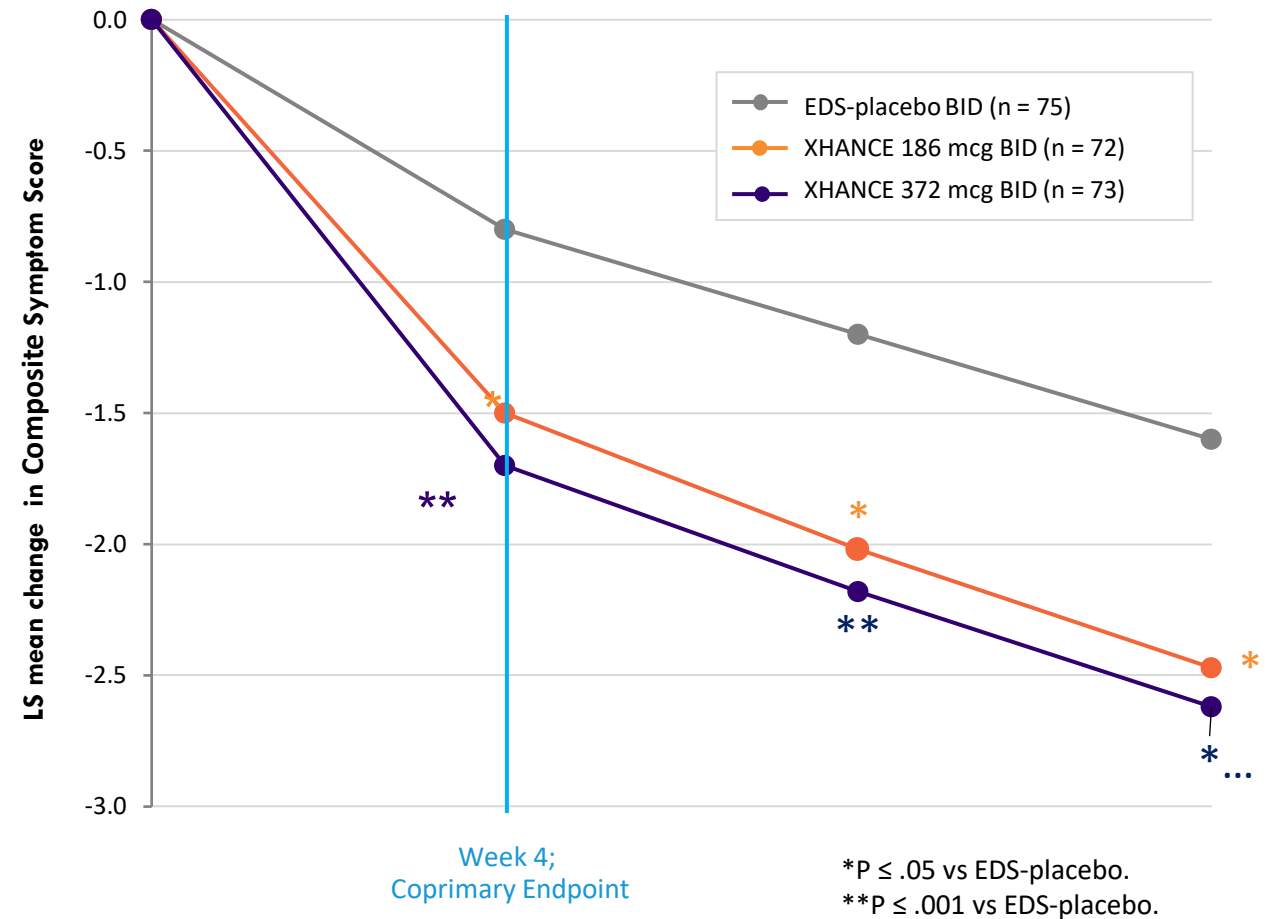
Nasal Congestion



Nasal Discharge



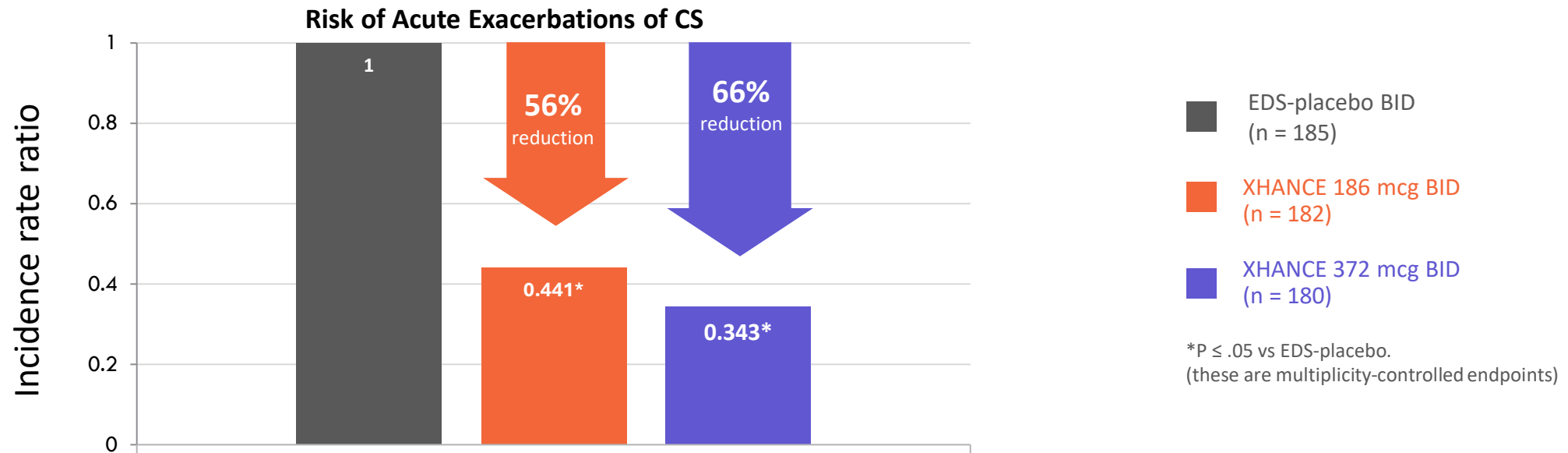
Facial Pain/Pressure



Coprimary Endpoint: LS mean change from baseline to week 4 in composite symptom score (CSS). CSS was the sum of congestion, facial pain/pressure, and nasal discharge scores. For each symptom 0 = no symptoms and 3 = severe. Symptoms were measured in the morning and averaged over the prior 7 days. BID, twice daily; CSS, composite symptom score; EDS, Exhalation Delivery System™; LS, least squares.

XHANCE Produced Breakthrough Reduction in Risk of Acute Exacerbations of Chronic Sinusitis (AECRS) (Pooled data from ReOpen1 and ReOpen2)

AECRS defined as worsening of ≥ 1 cardinal symptom of CS, lasting at least 3 days, that also required initiation of antibiotics or oral corticosteroids or an unscheduled acute care visit or inpatient care for increased sinonasal symptoms



Antibiotics were prescribed in 93% of acute exacerbations in the ReOpen trials

Type-1 error-controlled analysis of pooled data from ReOpen1 and ReOpen2. Total number of AECRS events (percentage of patients who experienced at least 1 event): EDS-placebo, 41 (15.7%); XHANCE 186 mcg, 20 (9.9%); XHANCE 372 mcg, 15 (7.8%). AECRS, acute exacerbation of chronic rhinosinusitis; BID, twice daily; CRS, chronic rhinosinusitis; EDS, Exhalation Delivery System™. 1. Full Prescribing Information for XHANCE (fluticasone propionate). OptiNose US, Inc.; 2023. 2. Data on file. OptiNose US, Inc.

Despite Patient Dissatisfaction, HCPs Have Tended To Cycle Standard-Delivery Nasal Steroids Before Escalating Treatment Or Referring For Surgery



Standard-delivery
Nasal Steroid Sprays

7

double-blind, placebo-controlled, randomized studies have been conducted to **assess effects of nasal steroids in patients with CS (without polyps), but none demonstrated significant benefit**¹

>80%

of patients with CS reported **frustration** with symptom relief when using a **standard-delivery nasal steroid spray**²

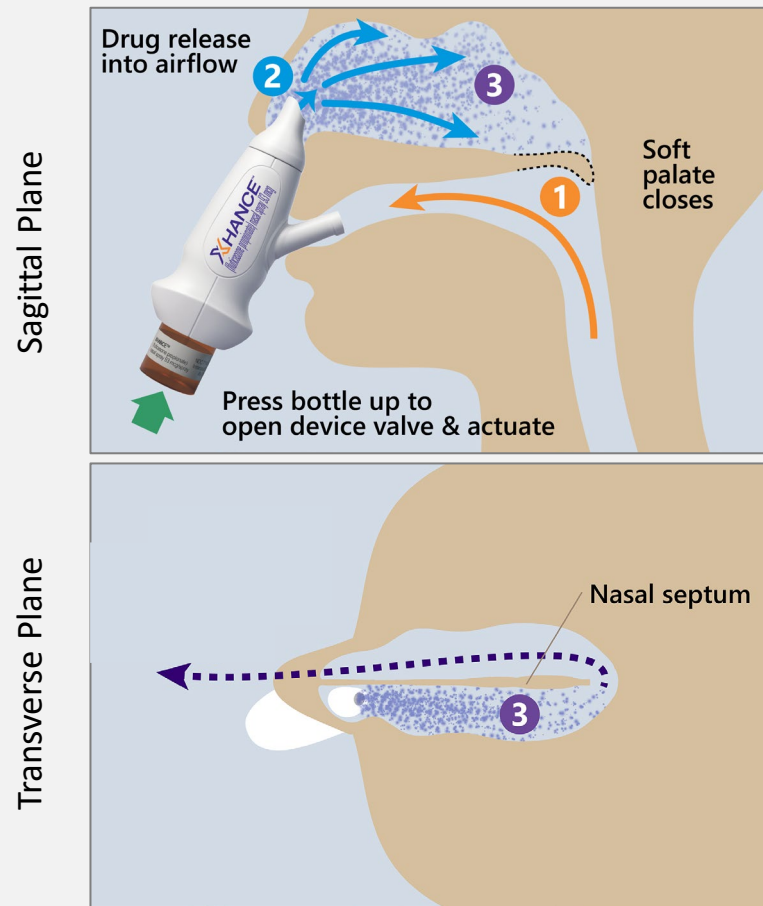
75%

of HCPs believe standard-delivery nasal steroid sprays **don't reach target sites of inflammation** and believe they **don't work well** for CS (despite working well for allergic rhinitis)³

CRSsNP, chronic rhinosinusitis without nasal polyps; AR, allergic rhinitis 1. Palmer JN, et.al. DOI: <https://doi.org/10.1016/j.jaip.2023.12.016> 2. Palmer JN, et al. Allergy Asthma Proc. 2019;40(1):48-56. One study found statistically significant improvement in symptoms with standard-delivery budesonide; however, the benefit was only in patients with atopy (allergic rhinitis) 3. Data on file Optinose survey of ~700 physicians including ~400 ENT and Allergy specialists and ~300 Primary Care

The Breakthrough Innovation is the Device – The Exhalation Delivery System (EDS)

The EDS creates Different Biomechanics During Delivery, Markedly Changing Drug Deposition



Unique biomechanics deposit drug in areas where sinuses drain and ventilate. Device shown in human factors and market studies to be easy for patients to use.

1 Closed palate

With EDS, the soft palate lifts/elevates and creates an air-tight seal between the nasal cavity and throat and lungs

2 Positive pressure

Widens entry passages and enables air to exit behind the nasal septum

3 Bidirectional flow

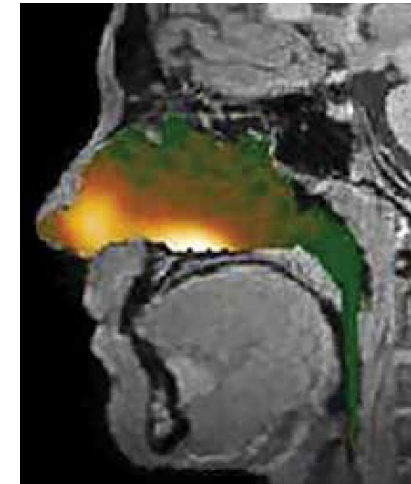
Exhaled air carries drug through airways and exits from opposite nostril (and not into throat)

OMC, osteomeatal complex.

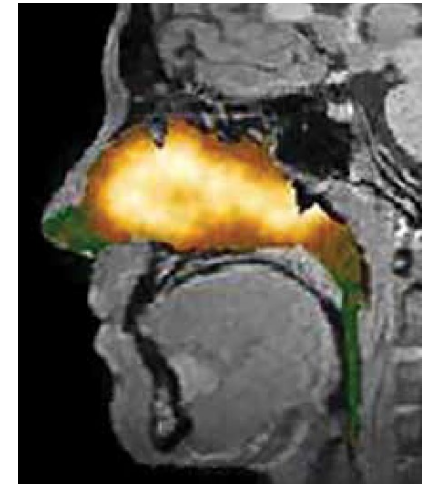
1. Djupesland PG. *Drug Deliv Transl Res*. 2013;3(1):42-62. 2. Data on file. OptiNose US, Inc.

The EDS Enables Dramatically Different Deposition vs Standard-Delivery Nasal Spray: with EDS, Topical Drug Can Reach Important Sites of Action

- The EDS deposits drug in high/deep sinonasal spaces to treat sinus drainage tracts and sinuses
- Standard nasal corticosteroid sprays deposit drug almost entirely in the bottom (inferior) and front (anterior) parts of the nasal cavity^{1,2}
- EDS deposition demonstrated in radiolabeled deposition studies³
 - Gamma camera images of distribution of radiolabeled solution after using the EDS (right) versus a standard nasal spray (left)
 - Both images are from the same healthy subject taken over 2 minutes after administration of radiolabeled solution and are representative of the overall findings from ~200 images and ~50 subjects



Standard Nasal Spray



The Exhalation Delivery System™

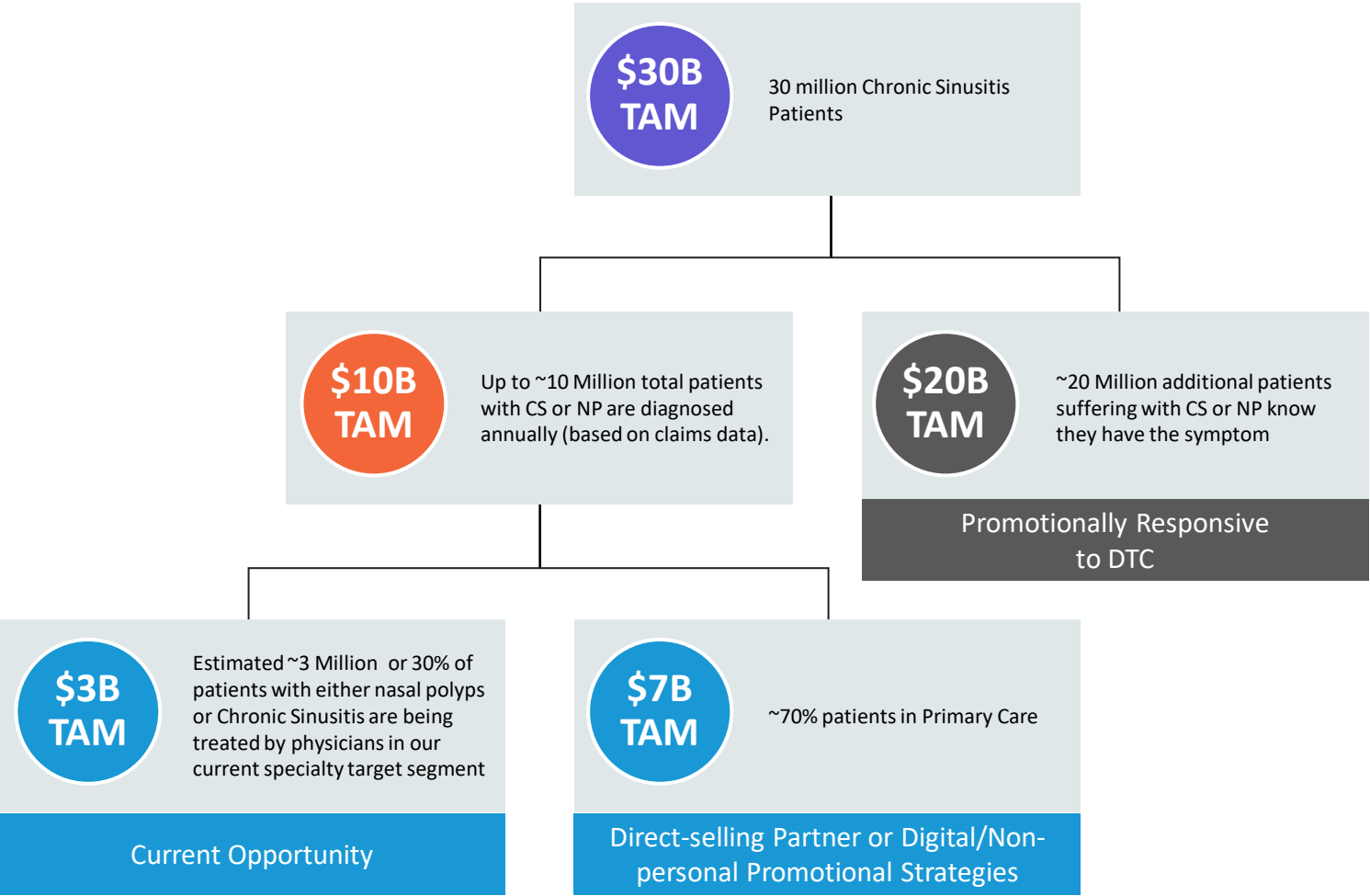
1 - Leach CL, et al. J Aerosol Med. 2015;28(5):334-340. 2. Siu J, et al. Int Forum Allergy Rhinol. 2019;9(9):958-970
3 - Djupesland PG. Drug Deliv Transl Res. 2013;3(1):42-62.

A background image of a man swimming in clear blue water. The man is in the foreground, slightly to the left, with his head and shoulders above water. He is looking towards the camera. His right arm is extended forward, and his left arm is also extended forward, creating a wake in the water. The water is a vibrant blue with some white foam from the swimmer's movements.

Market Opportunity and Updated Commercial Outlook

Paul Spence
Chief Commercial Officer

FDA Approval of XHANCE Creates Multiple Growth Opportunities



~70% of patient lives are in an insurance plan that covers XHANCE

~70% of XHANCE prescriptions written are filled

Chronic Sinusitis Launch – Expect to Exceed \$300M Peak Year Sales

Commercial Foundation	Sales Force	Hub Services	CS Clinical Data
<p>Robust domestic supply chain with second source of finished goods approved in March (1.5M units)</p> <p>Insurance Coverage (70%)</p> <p>Sales team (75 territories with ~8,000 targets)</p> <p>Digital Non-Personal Promotion (22,000 high potential CS prescribers)</p> <p>Existing Physician Relationships (60% of 2024 targets)</p>	<p>Optimized prescriber targeting in January using CS claims data instead of NP potential (40% new)</p> <p>Realigned and balanced sales territories to maximize growth potential</p> <p>Improved sales force efficiency and expanded HCP reach to ~105 per Territory Manager</p> <p>Fielded new CS training and promotional materials</p> <p>Inside sales supporting ~1,200 high potential CS prescribers in whitespace</p>	<p>Hub implemented in Jan'24 to support CS launch</p> <p>Improved physician office support</p> <p>Improved patient service</p> <p>Increased approval and fill rates</p> <p>Increased data visibility</p> <p>Increased volume capacity</p> <p>Improved co-pay administration</p>	<p>Key Opinion Leader engagement</p> <p>Speaker's Bureau</p> <p>Presentations at Medical Congresses</p> <p>Continuing Medical Education</p> <p>New Publications</p> <p>Disease burden</p>

XHANCE Patient Support Programs are Designed to Ensure Patients Receive Maximum Possible Coverage and the Lowest OOP Costs

Support Navigating Insurance

Patient support services powered by Asembia through a mix of technology and staffed patient care coordinators dedicated to XHANCE

Patient support services are available to patients through mail order AND for patients who prefer to pick up Rx at retail

Patient Affordability Solutions

Current offerings for commercially insured patients through hub and specialty pharmacy:

- \$0 copay first fill (bridge program)
- \$25 copay for covered patients
- \$0 copay for covered patients enrolled in pharmacy's refill program
- \$99 direct to patient (DTP/cash price) for patients without coverage or high deductible

Current offering for commercially insured patients through retail:

- \$0 to \$24.99 copay through relay health (for covered patients)
- Offer also promoted through GoodRx

Finally, a solution to help you get XHANCE for patients who need it

Access in 3 steps:

1

Send XHANCE Rx to ASPN Pharmacies

ePrescribe via EMR
ASPN Pharmacies, LLC
290 W. Mount Pleasant Ave.
Livingston, NJ 07039
NPI: 1538590690

XHANCE (fluticasone propionate)
Nasal Spray, 93 mcg
Recommended daily dose: 186 or
372 mcg BID
NDC: 71143-375-01

Prescriptions can also be faxed to ASPN
Pharmacies at 1-888-660-0124.

2

Include as much detail as possible with your Rx

- ICD-10-CM code(s)
- Relevant medical notes
- Treatment history

3

Get assistance and support

Our trained staff is available to guide you through the prior authorization process



XHANCE
(fluticasone propionate) nasal spray 93 mcg

XHANCE Patient Support Program

For Eligible Commercially Insured Patients

Pay As Little As \$0 for your prescription*

☐ I confirm that I am 18+ years of age.

[Print Savings Card](#)

*Click here for terms and conditions.

XHANCE
(fluticasone propionate) nasal spray 93 mcg

SAVINGS CARD

Change Healthcare
BIN# 004882
PCN# CN
GRP# WCOPT6005
ID# 12237262096

*See back of card for terms and conditions

Pay as little as \$0*

If you have any questions please call 1-833-XHANCE1

Employing Multiple Channels to Move Targeted HCPs from Awareness to Action

Naive

Interested

Activate

Tele Detail



3rd Party Media

doximity

Medscape

PeerDirect

sermo

deepintent+



Detail Aids



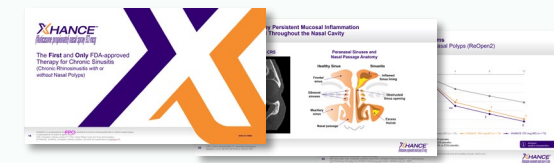
3rd Party E-Mail



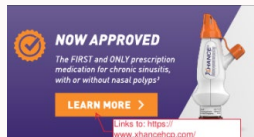
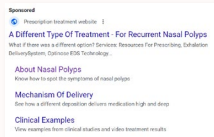
XHANCEHCP.com



Speaker Programs



Display / Search Engine Marketing



Samples / Demos



XHANCE Patient Support Program



Dedicated Patient Care Coordinators to Assist Office Staff

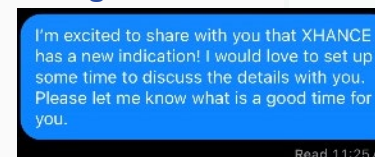
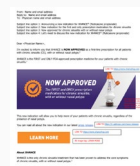


Prior Authorization/ Appeal Support and Resources for patients

Congresses / Medical Education



Digital Communication



optinose®

More than 87% of HCPs Indicate They are Likely to Prescribe XHANCE for CS Patients¹

Likelihood to Prescribe

Allergist (n=30)



ENT (n=30)



PCP (n=30)



- 1= Completely unlikely
- 2= Somewhat unlikely
- 3= Neither unlikely nor likely
- 4= Somewhat likely
- 5= Completely likely

Market research shows that HCP’s intent to prescribe XHANCE increased up to 4-fold for both first-and second-line use after exposure to the Chronic Sinusitis Therapeutic Product Profile

1. Source: CS Choice Drivers & Unmet Need Study; Aug 23,2023. Optinose market research of ~100 HCPs who treat patients with CS. Respondents were asked to review a Chronic Sinusitis Therapeutic Product Profile (meant to represent XHANCE) and to assume access, pricing and reimbursement comparable to existing branded intranasal steroids, prior to making a prescribing decision for a patient suffering from the symptoms of chronic sinusitis and a history of over-the-counter treatment.



Ramy Mahmoud, MD, MPH
Chief Executive Officer

Optinose – Incremental Growth Opportunities

There is additional growth potential within and beyond our current ENT/Allergy audience



Expand in Specialty: We believe there are **ROI positive opportunities** to expand sales territories (to ~115) in ENT and Allergy based on success/capital availability



PCP and DTC: Potential to secure a partner with direct sales infrastructure, and/or create value with other selling models, targeting the ~7 million CS patients in primary care today, then use DTC to activate the ~20 million people with CS not actively seeking care



Major Markets Outside the USA: The first-ever CS approval may create opportunities for value creation outside the U.S. and **we have maintained patents** in select major markets



Leverage: Our capabilities and infrastructure make Optinose an ideal partner to develop and/or commercialize **additional products in ENT and Allergy**

Differentiated Product Offers Significant Opportunity Fueled by Large Market, High Unmet Need that Is Recognized by Patients and HCPs, Strong Promotional Responsiveness, Limited Competition



Large Market Potential

CS represents a ~\$10 billion annual addressable market potential



Significant Unmet Need

>80% of patients with CS reported frustration with symptom relief when using a standard-delivery nasal steroid



Promotionally Responsive

After exposure to the XHANCE TPP, HCPs increase intent to prescribe by 4-fold¹



Highly Differentiated

Significantly reduced CS symptoms, regardless of phenotype, and reduced exacerbations by up to 66%

1. Source: CS Choice Drivers & Unmet Need Study; Aug 23, 2023. Optinose market research of ~100 HCPs who treat patients with CS.

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Q&A

Investor Relations – NASDAQ: OPTN

Analyst Coverage ¹

Jefferies: Glen Santangelo

Lake Street: Thomas Flaten

Piper Sandler: David Amsellem

H. C. Wainwright: Matthew Caufield

As of December 31, 2023:

- **\$73.7 million** in cash
- **Debt: \$130 million**
- **112 million** common shares o/s
- **46 million** options, warrants & RSUs o/s

Optinose Investor Contact

Jonathan Neely,
VP, Investor Relations and
Business Development
267-521-0531
Investors@optinose.com



investors@optinose.com



www.optinose.com



@optinose

¹ - Optinose is followed by the analysts listed above. Please note that any opinions, estimates or forecasts regarding the Company's performance made by these analysts are theirs alone and do not represent opinions, forecasts or predictions of Optinose or its management. Optinose does not by its reference above or distribution imply its endorsement of or concurrence with such information, conclusions or recommendations.



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